A BRIGHT LINE IN THE SKY? TOWARD A NEW FOURTH AMENDMENT SEARCH STANDARD FOR ADVANCING SURVEILLANCE TECHNOLOGY

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I. INTRODUCTION

John Doe, the head of a large organized crime syndicate, is under investigation by both state and federal law enforcement authorities. Doe leaves his home state and appears in Metropolis one day to visit a sick relative. While the Metropolis Police Department is caught by surprise upon Doe's appearance, it decides not to waste the opportunity. Metropolis police bring to bear the full force of their extensive and well-funded surveillance team.

A "beeper"[1] is placed in Doe's rental car to track his movements around town. The Metro Police rent the hotel room next to Doe's and install both infrared and sonar based through-the-wall monitoring devices, which give an accurate view of the adjoining room's contents, including any movements made, without penetrating the wall. Laser microphones are aimed at the room's windows to monitor conversations, and the phone line has pen registers,[2] trap and trace devices,[3] and traditional tapping (recording) devices attached to it.

Every time Doe leaves the room, he is scanned without his knowledge by millimeter wave technology to reveal all objects concealed beneath his

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1. A beeper is a small, concealable tracking device that police attach to an object within a suspect's control. This device is then monitored by remote to track the movements of the object to which it is attached. United States v. Karo, 468 U.S. 705, 707 (1984); United States v. Knotts, 460 U.S. 276, 277 n.1 (1983).

2. A pen register records the numbers dialed from a particular phone line. It does not record conversations. 18 U.S.C. § 3127(3) (2002) (defining the term "pen register"); Smith v. Maryland, 442 U.S. 735, 741–42 (1979).

3. A trap and trace device captures the source phone number of incoming phone calls. 18 U.S.C. § 3127(4) (2002).

clothes. Undercover police units, aerial surveillance units equipped with high-resolution camera equipment, and satellites equipped with high-powered cameras follow him. The police also access all privately-owned security videos and closed circuit television systems that catch images of Doe.

Everything that Doe eats, reads or listens to is recorded. Further, any movement he makes, everything he says, and any visits he makes or receives are likewise documented. Even within the confines of his hotel room, Doe cannot use the restroom without the Metropolis Police Department monitoring him. Since his appearance was a surprise, and the duration of his visit unknown, time was of the essence and search warrants were not procured.

Some of this warrantless surveillance is an impermissible invasion of Doe's Fourth Amendment rights against unreasonable searches and seizures.[4] However, how much of it violates the Fourth Amendment? Assume that Doe receives an addressed, sealed envelope at the hotel that contains a letter from another relative with whom Doe is involved in criminal activity. What if Doe opens this letter in the middle of a field at his sick relative's privately owned estate, under the watchful eye of high-powered satellite surveillance circling hundreds of miles overhead? Has he waived any privacy interest in this letter by simply opening it outside? Should he have expected a satellite to be watching? Is it unreasonable for Doe not to have expected such surveillance? What if, instead of a satellite, the security cameras in the hotel lobby caught the letter's contents when Doe opened it there? Should he have expected that? Do his Fourth Amendment rights properly turn on what his expectations are in this situation?

Courts grapple with precisely these types of questions in the face of increasingly available and effective surveillance technology. The Fourth Amendment is the source of constitutional protection against unreasonable governmental searches and seizures.[5] It protects against "unreasonable government invasions of legitimate privacy interests."[6] Absent a search or seizure, the Fourth Amendment does not apply.[7] Current Fourth Amendment jurisprudence[8] holds that a search occurs if (1) police observe behavior or view an area in which suspects subjectively expect privacy, and (2) society is willing to recognize that expectation of privacy as both reasonable and worth protecting.[9] Note that the first prong of the "Katz test" rests on a suspect's subjective expectations. Determining whether a

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4. For example, the through-the-wall monitoring devices used to watch Doe's hotel room without a warrant are likely a violation of his Fourth Amendment rights because they are "device[s]... not in general public use, [used] to explore details of" the room. Kyllo v. United States, 533 U.S. 27, 40 (2001). The effect of the *Kyllo* opinion is discussed in Part III of this Note.

5. U.S. CONST. amend. IV.

6. United States v. Chadwick, 433 U.S. 1, 11 (1977), *abrogated on other grounds by* California v. Acevedo, 500 U.S. 565 (1991).

7. Maryland v. Macan, 472 U.S. 463, 469 (1985).

8. Current, at least, as of May 2001. This may have changed with the decision of the Supreme Court announced in *Kyllo v. United States*, 533 U.S. 27 (2001). *See infra* text accompanying notes 136–95.

9. Smith v. Maryland, 442 U.S. 735, 740 (1979) (citing Katz v. United States, 389 U.S. 347 (1967) (Harlan, J., concurring)).

Fourth Amendment search has occurred requires an evaluation of subjective expectations of privacy.

Herein lies the problem. If constitutional searches turn on people's expectations of privacy, what effect does advancing surveillance technology have on such inquiries? Police surveillance technology ranges from primitive to state-of-the-art.[10] As these technologies become more widespread, will their use diminish expectations of privacy in daily life? If so, will their use thereby shrink Fourth Amendment protections, since much of Fourth Amendment search doctrine turns on what privacy was expected in a given situation? This result seems undesirable, but is it inevitable given the Court's current interpretation of the Fourth Amendment?

A new approach to Fourth Amendment jurisprudence must emerge to address questions of this type. This Note examines a brief history of Fourth Amendment search doctrine in Part II, pointing out that the Court seems to implicitly recognize the limitations of the Katz test by considering factors external to an individual's and/or society's expectations of privacy.[11] Part III examines the Court's most recent application of Fourth Amendment search doctrine in a case of high-tech surveillance: Kyllo v. United States.[12] Part IV suggests a Technologically-Advanced Device Standard which resolves many conflicts, both potential and real, with current Fourth Amendment jurisprudence and technology. Finally, Part V concludes with an application of the proposed Standard and illustrates the Standard in a situation involving pre-warrant surveillance.

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10. Police surveillance has become more effective at gathering detailed information as the technology behind it improves. A partial list of the currently available surveillance technology includes flashlights, binoculars, listening devices or "bugs," beepers, dogs as enhanced olfactory sense, high resolution cameras, and infrared detection devices or Forward Looking Infrared Radar. *See* Texas v. Brown, 460 U.S. 730 (1983) (flashlights); State v. Ward, 617 P.2d 568 (Haw. 1980) (binoculars); Katz v. United States, 389 U.S. 347 (1967) (listening devices or "bugs"); United States v. Karo, 468 U.S. 705 (1984) (beepers); United States v. Place, 462 U.S. 696 (1983) (dogs as enhanced olfactory sense); Dow Chem. Co. v. United States, 476 U.S. 227 (1986) (high resolution cameras); Kyllo v. United States, 533 U.S. 27 (2001) (infrared detection devices or Forward Looking Infrared Radar). Although not currently available, technology in development for law enforcement use includes handheld radar-based through-the-wall imaging devices, handheld acoustic systems for detecting concealed weapons from a distance, radar flashlights, and combination millimeter wave and infrared concealed weapons detection systems. *See* THE NATIONAL LAW ENFORCEMENT AND CORRECTIONS TECHNOLOGY CENTER, NLECTC VIRTUAL LIBRARY-TECHNOLOGY PROJECTS, *available at* www.nlectc.org/virlib/InfoList.asp?strType=Technology (last visited July 10, 2002).

11. *See, e.g.*, Dow Chem. Co. v. United States, 476 U.S. 227, 238 (1986) (finding the commercial availability of the technology used as partially determinative of the constitutionality of the search, regardless of the defendant's knowledge of or exposure to such products); Smith v. Maryland, 442 U.S. 735, 741 (1979) (finding some importance in the fact that the defendant's property rights were not infringed and that officers did not trespass on the defendant's property); *infra* notes 69–87, 105–17 and accompanying text.

12. 533 U.S. 27 (2001).

II. A BRIEF HISTORY OF CHANGES IN FOURTH AMENDMENT SEARCH ANALYSIS

A. The Initial Approach: Analogizing Between "Unreasonable" Searches and General Warrants

The text of the Fourth Amendment reads:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.[13]

The Fourth Amendment protects people only against *unreasonable* searches by the government. Thus it becomes necessary to determine what the term "unreasonable" means in the context of searches.

The Supreme Court first set out to answer this question by turning to the common law inherited from England. An excellent example of the Court's endeavors in this area is found in *Boyd v. United States*,[14] which is generally recognized as the Court's first important Fourth Amendment case.[15] Although *Boyd* dealt directly with a seizure, not a search, the case exemplifies early attempts by the Court to define the term "unreasonable" as used in the Fourth Amendment.[16] Justice Bradley, writing for the Court, explored in great detail the thinking of English jurists such as Lord Camden and Lord Coke to determine what, under English common law, was reasonable and unreasonable in a criminal context.[17] Justice Bradley approvingly quoted Lord Camden at length,[18] discussing

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13. U.S. CONST. amend. IV.

14. 116 U.S. 616 (1886).

15. *See, e.g.*, Morgan Cloud, *The Fourth Amendment During the Lochner Era: Privacy, Property, and Liberty in Constitutional Theory*, 48 STAN. L. REV. 555, 573 (1996).

16. *See Boyd*, 116 U.S. at 622. Specifically, the situation in *Boyd* was as follows: Boyd imported plate glass without paying the import duties due on the items. The government brought a civil forfeiture action against Boyd, seeking to keep the glass. Under a congressional statute authorizing subpoenas in such proceedings, the government moved to subpoena certain business records that Boyd kept. The trial court granted the motion. Boyd objected to the subpoena, claiming that it violated the Fourth and Fifth Amendments. *Id.* at 617–18.

17. *Id.* at 625–30. The Court recognized that the case before it arose from a civil forfeiture proceeding, but the Court extended Fourth Amendment protection to such hearings based on the similarities between such proceedings and forfeiture proceedings brought on by criminal offenses. *Id.* at 638.

18. *Id.* at 627–29. Ironically, attributing this lengthy quote to the Framers' mindset, a fact which Justice Bradley relies on heavily in this opinion, may have been an error. Thomas Y. Davies writes:

> Bradley's claim that the Framers would have viewed any seizure of papers as compelled self-incrimination relied upon Lord Camden's remarks as recorded in the longer case report of the 1765 proceedings in Entick. . . . However, it is unlikely the Framers were familiar with that version, which was not published until 1781. The analysis that Bradley

the main thought in this area of jurisprudence at the time: people entered into social contract with modern society for the "great end" of securing their property.[19] Any violation of this security, even a "bruising of grass," must be justified by a legally recognized exception to the law of trespass.[20] From the principles announced by Lord Camden, Justice Bradley went on to state that the right of security in property must be safeguarded against governmental abuse.[21] This protection is afforded by applying the principles announced by Lord Camden as the criteria for determining reasonableness under the Fourth Amendment.[22] Ultimately, the Court concluded that the term "unreasonable" applied as a prohibition against general warrants:[23] "The struggles against arbitrary power in which [the Framers] had been engaged for more than 20 years would have been too deeply engraved in their memories to have allowed them to approve of such insidious disguises of the old grievance which they had so deeply abhorred."[24] The Court went on to hold unconstitutional a congressional statute that, in essence, enabled prosecutors to compel production of incriminating documents by simply alleging their contents.[25] The Court felt such a practice amounted to a general warrant.[26] This practice was equated to a search for purposes of the Fourth Amendment, and violated provisions found there.[27] Thus, an unreasonable search was one that was functionally equivalent to the general warrants of English rule, one that infringed upon the property rights of the individual involved.[28]

B. A Slight Shift: Turning to Common Law Trespass

In the 1928 case of *Olmstead v. United States*,[29] the Court was faced with a situation that could occur today: the police tapped suspects' phones, recorded conversations, and used this information against the suspects in the ensuing

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quoted is not evident in the earlier, shorter case report of Entick in Wilson's Reports that the Framers were familiar with.

Thomas Y. Davies, *Recovering the Original Fourth Amendment*, 98 MICH. L. REV. 547, 727 n.512 (1999).

19. *Boyd*, 116 U.S. at 627.

20. *Id.*

21. *Id.* at 630.

22 *Id.*

23. A general warrant is "[a] warrant that gives a law-enforcement officer broad authority to search and seize unspecified places or persons; a search or arrest warrant that lacks a sufficiently particularized description of the person or thing to be seized or the place to be searched." BLACK'S LAW DICTIONARY 1579 (7th ed. 1999). The Fourth Amendment was enacted to protect the people against the use of such warrants by the government. Lo-Ji Sales, Inc. v. New York, 442 U.S. 319, 325 (1979). For an excellent summary of the history and use of general warrants in common law England, which formed the background against which the Fourth Amendment was enacted, see *Marcus v. Search Warrants of Property at 104 East Tenth Street*, 367 U.S. 717, 724–29 (1961).

24. *Boyd*, 116 U.S. at 630.

25. *Id.* at 638.

26. *Id.* at 624–35.

27. *Id.*

28. *Id.*

29. 277 U.S. 438 (1928).

prosecution.[30] The federal officers involved in that case tapped phone lines both at the suspects' office and homes.[31] The phones at the suspects' shared office were tapped in the basement of the building, and the phones at each suspect's home were tapped at the point the home phone line met with the phone lines on the street.[32] All taps were placed without first obtaining a warrant.[33] At no point in the investigation did the officers set foot on any private property owned by the suspects.[34]

After embarking on a lengthy discussion on the precedent of cases with similar issues,[35] the Court concluded:

> Neither the cases we have cited nor any of the many federal decisions brought to our attention hold the Fourth Amendment to have been violated as against a defendant, unless there has been . . . an actual physical invasion of his house "or curtilage" for the purpose of making a seizure. . . . We think, therefore, that the wire tapping here disclosed did not amount to a search . . . within the meaning of the Fourth Amendment.[36]

The Court relied on the physical location of the federal officers at the time the phones were tapped: since the officers did not "invade" the suspects' homes or curtilages,[37] the Fourth Amendment inquiry ended.[38] This reasoning demonstrates what is commonly known as the Trespass Doctrine. The Trespass Doctrine held that, unless law enforcement officers illegally entered privately-owned land, thereby committing the common law offense of trespass, the Fourth Amendment was not violated.[39] The Court slightly shifted its focus in the common law to resolve search disputes under the Fourth Amendment from analogizing with

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30. *Id.* at 456–57.
31. *Id.*
32. *Id.*
33. *Id.*
34. *Id.*
35. Chief Justice Taft's discussion of the precedent in this area is an excellent explanation of how the Court viewed such situations in the pre-*Katz* era. *See id.* at 458–66.
36. *Id.* at 466.
37. The curtilage of a home is determined by reference to four factors, set forth as "the proximity of the area claimed to be curtilage to the home, whether the area is included within an enclosure surrounding the home, the nature of the uses to which the area is put, and the steps taken by the resident to protect the area from observation by people passing by." United States v. Dunn, 480 U.S. 294, 301 (1987). The curtilage is given the same protection as the home itself. *Id.* at 300.
38. *Olmstead*, 277 U.S. at 466.
39. For another illustration of the Trespass Doctrine, see *Goldman v. United States*, 316 U.S. 129 (1942), *overruled in part by* Katz v. United States, 389 U.S. 347 (1967), where law enforcement authorities used a "detectaphone" pressed against a wall to listen and record conversations in the adjacent room. The Court held that such use by law enforcement did not violate the Fourth Amendment for reasons expressed in *Olmstead*: no trespass accompanied the surveillance. *Id.* at 135–36.

general warrants to common law trespass.[40] This remained the dominant analysis of Fourth Amendment search doctrine until well into the twentieth century.[41]

Olmstead is important in another respect because it explains the "protected areas" rationale.[42] This idea holds that no matter what interpretive approach is used to determine whether a search has occurred, the Fourth Amendment should only be applied to situations that directly involve one of the four enumerated areas of protection in the Amendment itself.[43] Thus, unless the challenged evidence was gathered from "persons, houses, papers, [or] effects,"[44] the reasonable search inquiry is not applicable because the area the evidence was taken from is not protected. As we will see, despite the doctrinal shift of *Katz v. United States*,[45] the Court seems to have readopted the "protected areas" rationale in subsequent cases.

C. Katz v. United States: *A Landmark Shift in Fourth Amendment Jurisprudence*

English common law and the Trespass Doctrine were abruptly abandoned in *Katz v. United States*.[46] The FBI suspected Mr. Katz of involvement in illegal gambling activity.[47] Agents noted that Mr. Katz would frequently use a public telephone to transmit wagering information from Los Angeles to Boston and Miami.[48] To record Mr. Katz's end of these conversations, the FBI attached a listening device to the exterior of the telephone booth.[49] This listening device did not physically penetrate the walls of the phone booth.[50] From this listening device, the FBI was able to gather enough information for an eight-count indictment.[51]

At trial, Mr. Katz objected to the admission of the taped conversations, claiming that this evidence was obtained in violation of his Fourth Amendment rights.[52] The trial court overruled his objections and admitted the evidence.[53] Mr. Katz appealed his conviction to the United States Supreme Court.[54] At the outset of the appeal, both sides tried to characterize the issues in ways that the Court

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40. *Compare* Boyd v. United States, 116 U.S. 616 (1886) *with* Olmstead v. United States, 277 U. S. 438 (1928).
41. *See, e.g., Goldman*, 316 U.S. at 129.
42. *See Olmstead*, 277 U.S. at 465.
43. *See id.*
44. U.S. CONST. amend. IV.
45. 389 U.S. 347 (1967).
46. *Id.*
47. *Id.* at 348.
48. *Id.*
49. *Id.*
50. *Id.* at 348–49.
51. *Id.* at 348.
52. *Id.* at 348.
53. *Id.*
54. *Id.* at 348–50.

ultimately rejected.[55] The government, utilizing the Court's own precedent,[56] argued that the phone booth was not a protected area, and thus not subject to Fourth Amendment protection.[57] Mr. Katz argued that the phone booth did indeed fit into the definition of a constitutionally protected area, and thus was subject to protection under the Fourth Amendment.[58]

The Court refused to conceive of the case in terms of protected areas.[59] In a surprise move, the Court held that the Fourth Amendment could not be reduced to the idea that it protects certain geographic areas; instead, the Court held in an oft-quoted passage that "the Fourth Amendment protects people, not places."[60] By relying on people's expectations of privacy, the Court shifted the inquiry—from whether the area is constitutionally protected or whether law enforcement violated some provision of the common law—to what the suspect expected at the time the observations were made.[61] The Court went on to state that warrantless intrusions into people's privacy are presumptively unreasonable and strongly advocated the role of the judiciary in protecting against unreasonable searches under the Fourth Amendment.[62] To emphasize this point, the Court declared that "searches conducted outside the judicial process, without prior approval by judge or magistrate, are *per se* unreasonable under the Fourth Amendment."[63] However, the Court did recognize that there are exceptions to this rule.[64] Important among these exceptions is anything the suspect voluntarily exposes to the public, since he does not expect privacy in things he has revealed.[65] This exception seems to follow logically the Court's dependence on the suspect's expectations.

This decision should not be understood as only a shift in Fourth Amendment jurisprudential paradigms from a property-based framework to an expectation-of-privacy framework. The *Katz* decision also represents one of the Court's earliest admissions that technology impacts the daily lives of citizens, and that justice and the judiciary must take such changes into account.[66] This is

55. For the appellant's formulation of the issues and the Court's response, see *id.* at 349–50. For a summary of the government's position and the Court's response, see *id.* at 351–52.

56. *Id.* at 352–53. For example, the government cited both *Olmstead v. United States*, 277 U.S. 438 (1928) (*see supra* text accompanying notes 29–44) and *Goldman v. United States*, 316 U.S. 129 (1942) (*see supra* note 39).

57. *Katz*, 389 U.S. at 351.

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.* at 352.

62. *Id.* at 356–57.

63. *Id.* at 357 (citing Stoner v. State of California, 376 U.S. 483 (1964); Chapman v. United States, 365 U.S. 610 (1961); Rios v. United States, 364 U.S. 253 (1960); and Jones v. United States, 357 U.S. 493 (1958)).

64. *Id.* An exhaustive discussion of exceptions to the warrant requirement is beyond the scope of this Note.

65. *Id.* at 351.

66. While the Court's discussion of the impact of technology on society is limited, its presence is undeniable. *See, e.g.*, *id.* at 352 ("To read the Constitution more narrowly is to ignore the vital role that the public telephone has come to play in private communication.").

important. Any Fourth Amendment jurisprudence that hinges on expectations of privacy must take into account currently and potentially available technology. It is the technology in society that helps shape the very expectations such a doctrine relies upon. Recognizing this, the Court in recent years has struggled with technology, the Fourth Amendment, and the attendant questions about the interplay between expectations of privacy and technology.

D. Applying the Katz *Test: The Fourth Amendment in Subsequent Search Cases*

We turn now to several post-*Katz* decisions concerning the Fourth Amendment to help analyze how the Court applies the *Katz* test. These cases involve technology that by today's standards is rudimentary, yet the Court's answer to the privacy inquiry is sometimes counterintuitive.[67] Notice, however, that the *Katz* test, developed by Justice Harlan in his concurrence in that case, involves only determining a subject's expectation of privacy, and society's willingness to protect that expectation as reasonable.[68] Not long after *Katz*, though, the Court began looking beyond individual privacy expectations and considering external factors to help resolve such cases. In *Smith v. Maryland*,[69] the Court addressed the placement of a pen register[70] on a private phone line. In *Smith*, Patricia McDonough, a robbery victim, gave police a description of the crime and a car she saw near the scene of the crime.[71] Soon after the robbery, Ms. McDonough began receiving obscene phone calls.[72] A car matching the description Ms. McDonough gave to the police was spotted in her neighborhood.[73] Police traced the car back to the defendant, Smith.[74] Working with the telephone company, police installed a pen register at the telephone company on equipment connected to Smith's line.[75] The pen register revealed calls from Smith's house to Ms. McDonough's number, and these calls corresponded to obscene calls reported by Ms. McDonough.[76] This and other evidence was used to obtain a search warrant, which uncovered further evidence linking Smith to the robbery.[77]

Smith objected to this evidence, claiming in part that installation of the pen register, which led to evidence the police used as a basis for the search warrant, required a warrant of its own.[78] The Court, applying the *Katz* test,[79] turned

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67. For example, in *Florida v. Riley*, 488 U.S. 445 (1989), the Court held that police hovering in a helicopter 400 feet over, and peering into, a private structure sitting on five acres of fenced-off land was not an invasion of a legitimate expectation of privacy. For a more detailed discussion of this case, see *infra* text accompanying notes 118–33.

68. *See Katz*, 389 U.S. at 361 (Harlan, J., concurring).

69. 442 U.S. 735 (1979).

70. For a definition of "pen register," see *supra* note 2.

71. *Smith*, 442 U.S. at 737.

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

to the nature of the equipment installed and the nature of phone lines in general.[80] The Court noted that since the only information yielded by pen registers is the numbers dialed from a phone and not the content of calls, in order to successfully suppress the evidence Smith must have a protected interest in the numbers themselves.[81] However, as the Court noted, these numbers must be revealed to the phone company in order to complete the calls that Smith dials from his phone.[82] Since Smith "revealed" these numbers to another party, he waived any claim of an expectation of privacy in these numbers.[83] Because he did not manifest an expectation of privacy in the numbers he dialed, Smith failed the first element of the *Katz* test. The collection of numbers dialed from his phone did not amount to a search for purposes of the Fourth Amendment and therefore no warrant was required to install the device.[84]

The *Smith* case appears to be a straightforward application of the *Katz* test. However, several undercurrents are at work in the decision. For example, the Court failed to completely exorcise the specter of the Trespass Doctrine from its thinking: "Since the pen register was installed on telephone company property at the telephone company's central offices, *petitioner obviously cannot claim that his 'property' was invaded or that police intruded into a 'constitutionally protected area.*'" [85] The Court also briefly considered the idea that *Katz* may not be an all-inclusive test.[86] In fact, the Court noted that since *Katz* is based on expectations of privacy, it may first be necessary to determine if the individual in question was

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79. For a discussion of the *Katz* test, see *supra* notes 59–65 and accompanying text.

80. *Smith*, 442 U.S. at 739–44.

81. *Id.* at 742.

82. *Id.* at 742–43.

83. *Id* at 744–45.

84. *See id.* at 745–46.

85. *Id.* at 741 (emphasis added). The Court then applied the *Katz* test, but nowhere in the discussion that follows did the Court disapprove of the Trespass Doctrine or even reconsider the statement quoted above. The Court simply noted that the Trespass Doctrine did not apply to this situation. *See id.*

86. The Court writes:

> Situations can be imagined, of course, in which *Katz'* two-pronged inquiry would provide an inadequate index of Fourth Amendment protection. For example, if the Government were suddenly to announce on nationwide television that all homes henceforth would be subject to warrantless entry, individuals thereafter might not in fact entertain any actual expectation of privacy regarding their homes, papers, and effects. Similarly, if a refugee from a totalitarian country, unaware of this Nation's traditions, erroneously assumed that police were continuously monitoring his telephone conversations, a subjective expectation of privacy regarding the contents of his calls might be lacking as well. *In such circumstances, where an individual's subjective expectations had been "conditioned" by influences alien to well-recognized Fourth Amendment freedoms, those subjective expectations obviously could play no meaningful role in ascertaining what the scope of Fourth Amendment protection was.* In determining whether a "legitimate expectation of privacy" existed in such cases, a normative inquiry would be proper.

Id. at n.5 (emphasis added).

able to form such expectations based on the environment that the individual is familiar with before applying the *Katz* test.[87]

The Court soon began to routinely consider what details individuals felt were gathered in violation of their Fourth Amendment rights, and the individuals' treatment of those details, as determinative of the *Katz* calculus. For example, in the companion cases of *California v. Ciraolo*[88] and *Dow Chemical Co. v. United States*,[89] the Court considered the Fourth Amendment implications of aerial surveillance. In *Ciraolo*, police received an anonymous tip that Ciraolo was growing marijuana in his backyard.[90] The police attempted to view Ciraolo's backyard from ground level, but two fences, one six feet tall and the other ten feet tall, blocked their view.[91] The police decided to charter a private plane and fly over the backyard to make observations.[92] The officers flew over Ciraolo's backyard at an altitude of 1,000 feet, observed marijuana, and took pictures with a standard 35mm camera.[93] This evidence was submitted along with an application for a search warrant; the warrant was granted, the marijuana seized, and the evidence admitted over Ciraolo's objection.[94] The California Court of Appeals held that the observation of Ciraolo's backyard without a warrant violated the Fourth Amendment.[95] That court ruled that Ciraolo had shown a subjective expectation of privacy by erecting the two fences, and that this expectation was reasonable, thereby satisfying both elements of the *Katz* test.[96] The California court also noted that the area of the backyard in question was within the curtilage of the home, and subject to the heightened protection of the home itself.[97]

The United States Supreme Court rejected this blend of Trespass Doctrine and the *Katz* test.[98] Turning first to the *Katz* test, the Court held that Ciraolo failed the second element of the inquiry.[99] Although conceding that Ciraolo satisfied the first element by erecting the fences around his yard, the Court held that his expectation of privacy in this context was not one that society was willing to recognize as reasonable.[100] The Court concluded that anything the homeowner exposes to public view, so long as the view is lawfully taken, is not something that

87. *Id.*
88. 476 U.S. 207 (1986).
89. 476 U.S. 227 (1986).
90. *Ciraolo*, 476 U.S. at 209.
91. *Id.*
92. *Id.*
93. *Id.*
94. *Id.*
95. People v. Ciraolo, 208 Cal. Rptr. 93, 98 (Cal. Ct. App. 1984).
96. *Id.*
97. *Id.*
98. *See Ciraolo*, 476 U.S. at 211–13. However, the Court did not reject the Trespass Doctrine outright, noting "[t]he observations by Officers Shutz and Rodriguez in this case took place within public navigable airspace . . . *in a physically nonintrusive manner*." *Id.* at 213 (emphasis added). Even when applying the *Katz* test, the Court seems still to find some remaining credibility in the Trespass Doctrine.
99. *Id.*
100. *Id.* at 214.

society is willing to protect.[101] The Court rejected Ciraolo's contention that the curtilage of his home was subject to heightened protection, noting that "[t]he Fourth Amendment protection of the home has never been extended to require law enforcement officers to shield their eyes when passing by a home on public thoroughfares."[102] The Court relied on the fact that the officers were within navigable airspace when they made their observations, and that from this vantage it was immediately apparent that Ciraolo was growing marijuana.[103] Thus the *Ciraolo* case represents a nearly pure application of the *Katz* test without significant influence from other ideas such as the Trespass or Protected Area Doctrines.[104]

Ciraolo was decided the same day as *Dow Chemical Co. v. United States*,[105] a case that also involved aerial surveillance by the government. There, the Environmental Protection Agency was investigating a Dow Chemical plant.[106] After visiting the facility for on-site inspections and being denied permission to inspect part of the facility, the EPA chartered a flight over the facility and used a mapping camera to take pictures of the equipment and grounds.[107] Again, the surveillance was conducted from legally navigable airspace.[108] However, distinguishing the facts in *Dow Chemical* from those in *Ciraolo*, the Court discussed two elements not present in the *Ciraolo* case: first, whether the area observed by EPA officials falls within an "industrial curtilage"[109] and is thus subject to heightened protection; and second, whether the pre-warrant use of *commercial grade* mapping cameras was permissible to view such an area.[110]

In a careful discussion of these elements, the Court again moved away from a "pure" *Katz* analysis and began to introduce considerations other than expectations of privacy that society is willing to protect.[111] The Court embarked on a lengthy discussion of curtilages and the implications of mapping cameras used

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101. *Id.* at 213.
102. *Id.*
103. *Id.* at 213–14.
104. *See generally id.* However, that is not to say the decision is free from the influence of such ideas. *See generally id.* For an example of passing reference to the Trespass Doctrine, see *supra* note 98.
105. 476 U.S. 227 (1986).
106. *Id.* at 229.
107. *Id.*
108. *Id.*
109. For an explanation of the term "curtilage," see *supra* note 37.
110. *See Dow Chem.*, 476 U.S. at 235.
111. The Court also considers factors such as the availability to the public of the equipment used, the nature of the area in question, the vantage point the observation was taken from, whether a physical entry into a protected area had occurred, and the nature of the equipment used. *See id.* at 234–39. The relation between these factors and subjective expectations of privacy that society is willing to protect is unclear. Thus, the Court here seems to be implicitly granting that *Katz* inquiries may sometimes include factors other than expectations of privacy that society is prepared to recognize as reasonable.

for surveillance.[112] Ultimately, the Court concluded that Dow's curtilage argument was irrelevant because the case dealt with *observation*, not physical invasion, of the area in question.[113] As to the mapping camera used, the Court held that the technology employed did not raise any special constitutional concerns because it merely enhanced human senses; it did not provide any extra-sensory information.[114] This was important to the Court in part because such "sensory enhancement" does not provide any intimate or hidden details that would not be available with naked eye observations.[115] Further, the Court found comfort in the fact that these cameras were commercially available for public purchase and use.[116] The Court concluded that Dow Chemical had no Fourth Amendment injury, and thus aerial surveillance of this type did not require a warrant.[117]

In *Florida v. Riley*,[118] the Court faced another case of aerial surveillance with issues similar to *Ciraolo*. Riley lived in a trailer home on five acres of rural land.[119] Behind his home Riley kept a greenhouse that was enclosed on two sides; shrubbery and Riley's mobile home blocked the view into the open sides of the greenhouse.[120] Riley surrounded the property with a wire fence and posted "Do Not Enter" signs on this fence.[121] Police received a tip that Riley was growing marijuana in the greenhouse, but when attempts at ground level surveillance proved ineffective, the police decided to fly over the property with a helicopter to try to observe the contents of the greenhouse.[122]

Circling at a height of 400 feet, the police observed that two panels of the greenhouse roof were missing.[123] From that vantage, the police were able to observe marijuana growing in the greenhouse through both the opening in the roof and at least one of the side openings.[124] These observations were made without any technological enhancement.[125] The evidence was used to obtain a search warrant and the police seized the marijuana.[126] Riley was charged with possession of

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112. The Court briefly examines the history of curtilages in earlier cases, noting that the area in question here is something between a curtilage and an open field. *Id.* at 235–36.

113. *Id.* at 237. Note that the Court does not say the Trespass Doctrine no longer applies to Fourth Amendment jurisprudence, only that it does not apply in this case. *Id.*

114. "Extra-sensory" in this context means through-the-wall imaging or other like perceptions not normally available to standard human senses. *See id.* at 238–39.

115. *Id.*

116. *Id.* at 238. As we will see, these factors are important to some who formulate alternatives to the *Katz* test. *See, e.g.*, Scott J. Smith, Note, *Thermal Surveillance and the Extraordinary Device Exception: Redefining the Scope of the* Katz *Analysis*, 30 VAL. U. L. REV. 1071 (1996).

117. *Dow Chem.*, 476 U.S. at 239.

118. 488 U.S. 445 (1989).

119. *Id.* at 448.

120. *Id.*

121. *Id.*

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

126. *Id.* at 448–49.

marijuana, but the trial court granted his motion to suppress.[127] The State appealed and the appellate court reversed the trial court's suppression order, but the Florida Supreme Court reversed the appellate court and reinstated the trial court's suppression order.[128]

The United States Supreme Court quickly analogized the case to *Ciraolo*.[129] The Court applied the *Katz* test, ruling that Riley exposed the contents of his greenhouse to the public within the navigable airspace, thereby waiving any claim of an expectation of privacy.[130] However, the Court again included elements seemingly unrelated to the *Katz* test. Similar to the *Ciraolo* and *Dow Chemical* cases, the Court mentioned the lawful vantage point of the police during the observation, finding it somehow a "different case" if the police made their observations from outside the bounds of navigable airspace.[131] But the Court's consideration of elements external to expectations of privacy was not limited to the vantage point of the police; the court also considered whether the use of a helicopter at that altitude interfered with Riley's use of the property.[132] Finding that the helicopter did not produce any excessive wind, noise, dust, or threat of injury, the Court mentioned in passing that Riley's property rights remained intact.[133] Here we see, yet again, a tacit approval of the Trespass Doctrine, the very doctrine that the *Katz* test purported to replace.

These cases represent only a sample of the Court's use of the *Katz* test.[134] As seen above, these cases include an analysis under the *Katz* test, but the analysis goes beyond the bounds of that test to include references to the Trespass Doctrine, the nature of the vantage point from which observations were made, and the nature of technology used to make the observations. The Court more recently had an opportunity to better articulate how Fourth Amendment protections against unreasonable searches operate in the context of advancing police surveillance technology; unfortunately, it failed to do so.[135]

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127. *Id.* at 449.
128. *Id.*
129. *Id.*
130. *Id.* at 450–52.
131. *Id.* at 451.
132. *Id.* at 452.
133. *Id.*
134. *See also, e.g.*, California v. Greenwood, 486 U.S. 35, 40 (1988) (holding that a person who places garbage on the curb for collection has not manifested a subjective expectation of privacy as to the contents of the garbage); United States v. Knotts, 460 U.S. 276, 281–82 (1983) (monitoring of a "beeper" in truck's cargo while truck is on public roads is not a search because there is no reasonable expectation of privacy as to simple observation while on public roads); United States v. Miller, 425 U.S. 435, 442–43 (1976) (holding that a bank depositor has no privacy interest in personal information turned over to a bank in order to hold and use an account at the institution).
135. *See* Kyllo v. United States, 533 U.S. 27 (2001), discussed *infra* at Part III.

III. *KYLLO V. UNITED STATES*: A RETREAT TO PROTECTED AREAS?

The Court further complicated application of the *Katz* test with the case of *Kyllo v. United States*.[136] Danny Kyllo lived in a triplex home in Florence, Oregon.[137] In 1991, federal agents suspected Kyllo of growing marijuana in his home.[138] Indoor cultivation of marijuana usually requires high-intensity growth lamps to simulate sunlight; such lamps generate great amounts of heat, causing that section of the home to emanate more heat than is typical of similarly situated homes without such indoor pursuits.[139] In order to confirm their suspicions, federal agents decided to scan Kyllo's house with a thermal imaging device called the Agema Thermovision 210.[140] The Agema Thermovision 210 registers heat from objects within its view and converts the heat it observes into an image.[141] The heat coming off of objects scanned with the device is not normally visible to the unaided eye.[142] The image produced by the device is a black and white picture of the objects within the device's scanning area; heat differences between objects are registered by differing shades of black and white.[143] The color scale shown represents the differing degrees of heat detected: cool objects appear darker, and warmer objects appear lighter.[144]

The federal agents sat in a parked car across the street from Kyllo's house at 3:20 a.m. and scanned his home with the Agema Thermovision 210 without a warrant.[145] They also scanned the other homes in the triplex, as well as neighboring structures, to determine the relative warmth of other buildings in the area at that time of night.[146] Specifically, the agents noted that the garage of Kyllo's home and one of the exterior walls gave off more heat than the neighboring structures.[147] This information, along with utility bills gathered from records on Kyllo's home and tips from informants, was submitted to a federal magistrate judge as support for a search warrant application.[148] The federal magistrate issued the requested search warrant.[149]

The government searched Kyllo's house and found an indoor marijuana growing operation that involved more than 100 marijuana plants.[150] This evidence was used as the basis of a one-count federal indictment for manufacturing

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136. 533 U.S. 27 (2001).
137. *Id.* at 29.
138. *Id.*
139. *Id.* at 29–30.
140. *Id.* at 29.
141. *Id.* at 29–30.
142. *Id.* at 29.
143. *Id.* at 29–30.
144. *Id.*
145. *Id.*
146. *Id.* at 30.
147. *Id.*
148. *Id.*
149. *Id.*
150. *Id.*

marijuana.[151] Kyllo moved to suppress this evidence before trial in the federal district court, and his request for suppression was denied.[152] Thereafter Kyllo entered a conditional guilty plea.[153]

On appeal, the Ninth Circuit Court of Appeals ordered a remand to the district court for a determination of the invasiveness of the Agema Thermovision 210.[154] On remand, the District Court for the District of Oregon found that the device did not penetrate the walls of the home and that it did not record or reveal any intimate details of the home or its occupants.[155] As such, it ruled that the device did not require a warrant before use by law enforcement.[156] The district court upheld the denial to suppress the evidence seized from Kyllo's home.[157]

The Ninth Circuit, receiving the case again after the district court's rulings on remand, initially reversed and found that Kyllo had met both prongs of the *Katz* test.[158] Kyllo met the first prong by "mov[ing] his agricultural pursuits inside his house," manifesting his subjective expectation of privacy.[159] Kyllo satisfied the second prong of the *Katz* test because the Ninth Circuit felt a bright line needed to be drawn at the entrance of the home; any warrantless invasion beyond that threshold should be presumed unconstitutional.[160] However, upon rehearing, the Court of Appeals reversed its position and affirmed the trial court.[161] In doing so, the Ninth Circuit applied the *Katz* test again, but reconsidered which issues the two prongs applied to.[162] In the court's new formulation, Kyllo did not attempt to hide the heat emanating from his home; he thus failed to manifest any subjective expectation of privacy in the heat.[163] Further, the Ninth Circuit held that Kyllo's expectation of privacy in the heat coming from his home was not reasonable, because such heat did not reveal intimate details of his life, but

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151. *Id.* Interestingly, the statute under which Kyllo was charged uses the term "manufacture" as generically applying to all controlled substances; thus, although marijuana is typically grown, under the applicable federal law in his case, Kyllo was charged with manufacturing. *See* 21 U.S.C. § 841(a)(1) (1991); *Kyllo*, 533 U.S. at 30.

152. *Kyllo*, 533 U.S. at 30.

153. *Id.*

154. United States v. Kyllo, 37 F.3d 526, 531 (9th Cir. 1994).

155. United States v. Kyllo, No. CR. 92-51-FR, 1996 WL 125594, at *2 (D. Or. Mar. 15, 1996).

156. *Id.*

157. *Id* at *5.

158. United States v. Kyllo, 140 F.3d 1249, 1252–55 (9th Cir. 1998).

159. *Id.* at 1252.

160. *Id.* at 1253.

161. United States v. Kyllo, 190 F.3d 1041, 1047 (9th Cir. 1999). It is interesting to note that this rehearing and reversal came about after a change in the composition of the panel hearing the case. *Compare* United States v. Kyllo, 140 F.3d 1249, 1250 (9th Cir. 1998) ("Before: Noonan, Hawkins, Circuit Judges, and Merhige, District Judge") *with* United States v. Kyllo, 190 F.3d 1041, 1043 (9th Cir. 1999) ("Before: Brunetti, Noonan, and Hawkins, Circuit Judges"). The fact that the composition of the appellate panel had changed did not escape the notice of the United States Supreme Court. *See* Kyllo v. United States, 533 U.S. 27, 31 (2001).

162. *See Kyllo*, 190 F.3d at 1046–47.

163. *Id.* at 1046.

rather "amorphous 'hot spots' on the roof and exterior wall."[164] Thus the Ninth Circuit, after rehearing the case and reversing its previous position, affirmed the district court and both the warrantless search and its fruits were held admissible against Kyllo.[165] Kyllo appealed, and the Supreme Court granted certiorari.[166]

The Court began its discussion by reviewing the history of searches under the Fourth Amendment. While much of this discussion has been covered in this Note,[167] some important highlights are worth examining. The Court began by noting that routine visual surveillance of a home was permissible under the Trespass Doctrine, because such surveillance did not involve any invasion of property rights.[168] However, the Court noted that property rights no longer form the basis of Fourth Amendment search analysis.[169] The Court also noted that this shift in jurisprudence did not affect routine visual surveillance of a home.[170] The Court approvingly quoted language from *Ciraolo*: "The Fourth Amendment protection of the home has never been extended to require law enforcement officers to shield their eyes when passing by a home on public thoroughfares."[171] This holding is not based on restrictions of searches under the Fourth Amendment; rather, it is because such instances are not searches at all.[172] Thus, regardless of the location, in order to constitute a search, the suspect must have manifested a subjective expectation of privacy in the area being looked into; without such an expectation, the "search" by the government is not a search in the constitutional sense.[173]

After its examination of Fourth Amendment jurisprudential history, the Court began to explore the effect of advancing technology on privacy, especially privacy in the home.[174] Admitting the impact of advancing surveillance technology on privacy, the Court stated, "It would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology. . . . The question we confront today is what limits there are upon this power of technology to shrink the realm of guaranteed privacy."[175] The Court continued this thought, noting the inherent difficulties of applying the *Katz* test to areas outside the home; however, the Court seemed to draw a bright line at the home.[176] In order to protect the home, the Court cited a "ready criterion, with roots deep in the common law."[177] That criterion defines a search as "obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical

164. *Id.* at 1047.
165. *Id.*
166. Kyllo v. United States, 530 U.S. 1305 (2000).
167. *See supra* Part II.
168. Kyllo v. United States, 533 U.S. 27, 31–32 (2001).
169. *Id.* at 32.
170. *Id.*
171. *Id.* (quoting California v. Ciraolo, 476 U.S. 207, 213 (1986)).
172. *Id.*
173. *Id.* at 32–33.
174. *See id.* at 33–34.
175. *Id.*
176. *See id.* at 34.
177. *Id.*

'intrusion into a constitutionally protected area' . . . at least where (as here) the technology in question is not in general public use."[178] This criterion, the Court reasoned, will protect individual privacy inside the home in the face of advancing surveillance technology.[179] Further, this test is intended to preserve the protections envisioned by the Founding Fathers when enacting the Fourth Amendment.[180] Applying this test to the case before it, the Court ruled that the warrantless use of an Agema Thermovision 210 was unconstitutional because it was not in general public use and revealed information not otherwise obtainable by unaided human senses without entering the home.[181]

There are several themes worth noting in the majority's analysis in *Kyllo*. First, there is another apparent blend of the "protected areas" approach, which the Court in earlier cases rejected,[182] and the Trespass Doctrine. In an apparent retreat from a pure *Katz* analysis, the Court seems to rely on physical location, similar to the Trespass Doctrine, to arrive at its conclusion.[183] Further, the fact that the observations were of a home, one of the enumerated areas of the Fourth Amendment,[184] appears important to the court.[185] As Justice Scalia, the author of the *Kyllo* opinion writes, "any physical invasion of the structure of the home, 'by even a fraction of an inch,'" is impermissible.[186] Describing the Court's approach to homes as "bright line,"[187] Justice Scalia continues, "In the home, our cases show, *all* details are intimate details, because the entire area is held safe from prying government eyes."[188] In fact, throughout Justice Scalia's discussion of this case, he consistently treats the home as having heightened protection under the Fourth Amendment by virtue of the fact that it is a home.[189] This rationale does not attempt to determine suspects' expectations of privacy, or the reasonableness of such expectations. Instead, it substitutes such considerations for a determination of where the purported search occurred. While not directly predicated on the common law tort of trespass, this rationale does rely solely on physical location and position of government officials in relation to protected physical locations. By retreating from the *Katz* test, and focusing again on considerations such as physical location, the Court seems to be incorporating elements of both protected areas and the Trespass Doctrine into modern Fourth Amendment jurisprudence.

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178. *Id.* (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)).
179. *Id.*
180. *Id.*
181. *Id.* at 40.
182. *See, e.g.*, Katz v. United States, 389 U.S. 347 (1967) (rejecting the protected areas rationale). For an explanation of "protected areas" under the Fourth Amendment, see discussion of *Olmstead v. United States*, 277 U.S. 438 (1928), *supra* text accompanying notes 29–44.
183. *See Kyllo*, 533 U.S. at 37–38.
184. *See* U.S. CONST. amend. IV.
185. *See Kyllo*, 533 U.S. at 37.
186. *Id.* (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)).
187. *Id.* at 40.
188. *Id.* at 37 (emphasis in original).
189. *See generally id.*

Another theme present in the *Kyllo* decision deals with sensory-enhancing surveillance.[190] The Court apparently finds the availability of the technology itself important; at least part of the Court's analysis rests on the fact that the technology employed in this case was not in general use by the public at the time.[191] In fact, the Court summarizes its position by stating that, "Where, as here, the Government uses a device *that is not in general public use*, to explore details of the home that would previously have been unknowable without physical intrusion, the surveillance is a 'search' and is presumptively unreasonable without a warrant."[192] The Court seems to be struggling with developing a coherent standard that reconciles the privacy rights guaranteed under the Fourth Amendment and decisions such as *Katz* with increasingly advanced surveillance technology. However, note that the Court's treatment of technology in this context again lacks any discussion of reasonable expectations of privacy.[193] Instead, the Court retreats from such a *Katz* analysis; it finds the availability of technology to the public at least partially determinative of the permissibility of such technology's pre-warrant use.[194] One may assume that the Court recognizes the limitations of basing Fourth Amendment protections on assumptions that technologically-uninformed citizens are able to make. However, the basis of the Court's pronouncement, at least in this regard, goes unnamed.[195]

IV. A TECHNOLOGICALLY-ADVANCED DEVICE STANDARD

It is submitted that any time the police use technologically-advanced surveillance devices, such surveillance is a search requiring a warrant if the observer gathers details that would be unavailable to unaided human senses without physical intrusion into the area under observation.[196] This Standard need not apply to searches that are carried out without technologically-advanced devices; such situations are manageable under the *Katz* test. The Standard has the advantage of potentially resolving shortcomings of the *Katz* test noted by the Court itself and is suggested by the Court's most recent decisions in this area.

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190. *See id.* at 33–34, 39–40.

191. *See supra* note 178 and accompanying quote.

192. *Kyllo*, 533 U.S. at 40 (emphasis added). This position is essentially one suggested by Professor LaFave. *See infra* note 196.

193. *See Kyllo*, 533 U.S. at 39–40.

194. *Id.* at 40.

195. *See id.*

196. Although arrived at independently, the Standard proposed by this Note is not a new suggestion. Professor Wayne LaFave suggested a similar standard when police use binoculars and other visual surveillance devices. *See* WAYNE R. LAFAVE, SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT § 2.2(c) (3d ed. 1996). Kenneth Troiano phrased it as a "Limiting Principle," proposing that "[a] search is the use of technology to augment the senses in order to obtain information that could not have otherwise been obtained from a lawful vantage point without such an augmentation." Kenneth Troiano, Comment, *Law Enforcement Use of High Technology: Does Closing the Door Matter Anymore?*, 24 CAL. W. L. REV. 83, 94 (1987–88). In fact, Mr. Troiano suggested that technologically-enhanced visual surveillance without a warrant by police be limited to providing more detail to observations already possible from a lawful vantage point. *See id.* at 97 n.92. The Technologically-Advanced Device Standard proposed here is nearly identical to Mr. Troiano's "Limiting Principle." *See generally id.*

As noted above, the Court has modified its approach to searches under the Fourth Amendment from a prohibition on general warrants[197] to the Trespass Doctrine[198] to protecting expectations of privacy[199] to an apparent amalgam of "protected areas," Trespass Doctrine, and the *Katz* test.[200] The *Kyllo* decision demonstrates the difficulty in conceiving of Fourth Amendment search cases employing technologically-advanced surveillance devices in terms of these traditional approaches; the Court did not directly apply the *Katz* test, but instead blended theories together to reach the desired result.[201] The Court's refusal to use a "pure" application of the *Katz* test evinces the need to develop a new doctrine in this area, one that provides an easily followed guideline for law enforcement and properly balances the individual's right to privacy with the government's interest in crime prevention.

Further, the Court has implicitly recognized the shortcomings of the Katz test. There is more than one instance where the Court included elements foreign to the *Katz* analysis in search cases to arrive at its conclusion.[202] The Court has also stated that the *Katz* test may be unworkable at times, particularly in situations where the individual may be unable to form the expectations required for a *Katz* analysis.[203]

Some obvious problems arise in this context. Surveillance technology currently used or in production affords many options to circumvent privacy expectations.[204] It also seems unreasonable to require the citizenry to keep current on the availability of surveillance technologies and to modify their expectations accordingly. Since the majority of individuals in society will remain unaware of such technology and what it can and cannot do, their expectations will remain static while the technology increases its ability to gather information about their lives.

Nor should individuals find comfort in the fact that the *Katz* test looks to the individual's expectations, because the second prong requires societal sanctioning of those expectations. Even if the technologically-unaware decide to proceed in their lives with expectations greater than current surveillance technology may allow, courts might find that those expectations are so outdated as to be unreasonable. Thus, the surveillance in question may not rise to the level of a search and an individual may not find protection under *Katz*.[205]

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197. *See generally* Boyd v. United States, 116 U.S. 616 (1886).

198. *See generally* Olmstead v. United States, 277 U.S. 438 (1928).

199. *See, e.g.*, Katz v. United States, 389 U.S. 347 (1967).

200. *See generally* Kyllo v. United States, 533 U.S. 27 (2001).

201. *See generally id.*

202. For example, see the discussion of *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986), *supra* text accompanying notes 105–17.

203. *See supra* note 86 (quoting Smith v. Maryland, 442 U.S. 735, 741 n.5 (1979)).

204. *See supra* note 10 for a brief discussion of some technologies available or in production for law enforcement surveillance use.

205. A number of cases provide examples of "searches" that are not searches under the *Katz* test. *See* Florida v. Riley, 488 U.S. 445 (1989) (holding that a resident with an open greenhouse had no expectation of privacy in his greenhouse contents because he

Since advancing surveillance technology has created much of the confusion surrounding Fourth Amendment search jurisprudence, it seems the logical place to begin in developing an appropriate standard. Common sense tells us that the purpose of a search is to uncover information that was previously unknown or unverified. However, the manner in which a search is conducted is significant. As noted above, the speed and complexity of technological advances may not allow individuals' expectations to keep pace. As Scott J. Smith noted, "Before ascertaining whether an individual manifested a certain reasonable expectation of privacy, it is first necessary to determine from the nature of the device at issue whether that individual was realistically able to form such an expectation."[206] Mr. Smith, in developing his "Extraordinary Device Exception," suggests differentiating between searches that involve "extraordinary" devices and all other searches.[207] Such a parallel approach allows courts to immediately separate out cases that a "pure" *Katz* analysis cannot accommodate.[208] This is the first step in the approach suggested here. Any technologically-advanced device used to gather information during surveillance should be considered under a different standard. Surveillance and/or physical searches not employing such devices should be considered under the traditional *Katz* analysis.

The question naturally arises as to what the basis of this differentiation should be. This Note proposes that any technology that provides "extra-sensory" information to the user should be subject to the proposed Standard. The term "extra-sensory" in this context means any information, including visual detail, that is not immediately available to unaided human senses from the observer's current position. Thus, infrared detection devices, high-powered satellite imagery cameras, and sonar-based through-the-wall detection devices are defined as "technologically-advanced" under this notion.[209] Devices such as flashlights, binoculars, and other similar "low-tech" devices are not covered by this definition because these devices help provide *more* detail to what is already observed, not

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voluntarily revealed contents to those in navigable airspace); California v. Ciraolo, 476 U.S. 207 (1986) (holding that aerial surveillance of a backyard is not a "search" because the resident revealed the contents of his backyard to those within navigable airspace, and thus did not manifest a subjective expectation of privacy); Dow Chem. Co. v. United States, 476 U.S. 227 (1986) (holding that owner of industrial complex has no Fourth Amendment injury when complaining of pre-warrant aerial surveillance employing high resolution mapping cameras).

206. Smith, *supra* note 116, at 1112.

207. *Id.* at 1112. An "extraordinary device" under this exception is one that courts find is not "common and integrated into the societal experience" of the particular community in which the court sits. *Id.* at 1114. A comprehensive critique of this proposed exception is beyond the scope of this Note. However, one wonders if such an exception would accept the inevitable erosion of Fourth Amendment protection that would result under such a standard as new and more invasive technology becomes available and used in the community where the court sits.

208. *See id.* at 1112.

209. Ironically, dogs used to "enhance" human olfactory senses would be "technologically-advanced" because, it is assumed, if the smell of the contraband in question were immediately apparent, then use of canine assistance would be unnecessary. Thus, dogs employed by law enforcement presumably provide detail unavailable to human senses.

unavailable detail.[210] The distinction rests on the fact that devices such as binoculars and flashlights merely enhance what is already seen and heard, while more advanced devices provide the user with information that would be impossible to gather without the aid of such a device from the current vantage point.[211]

This standard seems to have worked its way into the Court's thinking already. Indeed, the Supreme Court itself suggests this standard. As noted above, the Court announced in *Kyllo v. United States* that a search occurs whenever police gather "by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without a physical 'intrusion into a constitutionally protected area,' . . . at least where (as here) the technology in question is not in general public use."[212] However, the Court announced in *Katz* that "the Fourth Amendment protects people, not places."[213] In fact, the Fourth Amendment shift in *Katz* was predicated partially on a refusal to limit Fourth Amendment protections to certain specifically protected areas.[214] Therefore, such protections, when dealing with technologically-advanced surveillance, should not be limited to the home, as suggested in *Kyllo*.[215] It seems doubtful that the Court would truly adhere to a "protected areas" approach.[216] The Standard suggested here employs the test used in *Kyllo*, but excludes the questionable elements of that test.

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210. It is unlikely that the police will find themselves in pitch black with no visual detail whatsoever, such that turning on a flashlight or overhead light will provide *new* details not already detected (to whatever lesser degree of accuracy) by the unaided human eye.

211. It is conceded that there may be cases requiring a careful analysis of the device used. For example, visual surveillance cases involving high powered binoculars and/or telescopes may arise, where unaided human sight would perceive only a dot on the horizon, but the telescope/binoculars used reveal details such as suspect descriptions and actions taken. Such cases must be dealt with on a case-by-case basis. However, the Standard proposed here anticipates such cases: even if a dot is perceived on the horizon, so long as *something* is perceivable by unaided human senses, then law enforcement would merely be enhancing its perception of what is already seen. In such a situation the Standard would not apply. When the telescope/binoculars reach a point of magnification at which they are providing *completely new information*, and not even a dot on the horizon is visible to the naked eye, then the Standard requires a warrant.

212. Kyllo v. United States, 533 U.S. 27, 34 (2001) (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)).

213. Katz v. United States, 389 U.S. 347, 351 (1967).

214. *See id.*

215. *See Kyllo*, 533 U.S. at 40.

216. In fact, such an approach has not been directly endorsed by the Court in the post-*Katz* era, and was rejected by the Court in *Katz* itself. *Katz*, 389 U.S. at 351. Nor should such protection be limited to specific areas. If the Fourth Amendment was so limited, individuals might find themselves in situations similar to the one posited by Professor Amsterdam: "[A]nyone can protect himself against surveillance by retiring to the cellar, cloaking all the windows with thick caulking, turning off the lights and remaining absolutely quiet." Anthony G. Amsterdam, *Perspectives on the Fourth Amendment*, 58 MINN. L. REV. 349, 402 (1974). However, with technologies on the horizon such as through-the-wall imaging, even this might not be enough to ensure privacy if the Fourth Amendment were so limited.

The Technologically-Advanced Device Standard proposed here avoids further pitfalls of the *Katz* test. In past decisions, the Court frequently focused on the precise technology and how available that technology was to the general public.[217] However, as time progresses, more advanced technology becomes available to the general public. Eventually, as technology disperses into society, individuals' lives and expectations are shaped by such technology.[218] As technology eventually creates more invasion into individuals' lives, expectations will adjust themselves accordingly. Fourth Amendment protections, if they remain based on such expectations, will likely shrink along with the expectations of privacy.[219] The Technologically-Advanced Device Standard proposed here escapes this dilemma because it is based on characteristics of the technology itself and does not consider individual expectations.

Further, the proposed Standard anticipates technology yet to be developed. Because it tests surveillance by whether or not the information uncovered would be available without advanced devices, the Standard naturally covers potential future situations based on new technology. It does not matter what type of technology is used; if the technology provides details that are new and unavailable without the use of that technology, then the observation requires a warrant.

Incorporating the Technologically-Advanced Device Standard into current Fourth Amendment jurisprudence leads to the following analytical framework:

Question 1. Did the observer use a "technologically-advanced" device to perform the surveillance, where a "technologically-advanced" device is one that provides any information, including visual detail, that was completely unavailable to unaided human senses from the observation point? If the answer is yes, go to Question 2. If not, go to Question 3.

Question 2. Did the observer gather information that was unavailable to unaided human senses without physical intrusion into the area under observation? If so, then the conduct of the observer was a search and required a warrant under the Fourth Amendment. If not, then the conduct was not a search in the constitutional sense, and no warrant was required.

Question 3. Did the individual have a subjective expectation of privacy, and if so, was that expectation of privacy one that society is willing to recognize as reasonable?[220] This is the traditional *Katz* test.[221]

V. CONCLUSION

For an application of the proposed Technologically-Advanced Device Standard, we return to our out-of-town crime boss, Mr. Doe. Mr. Doe would

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217. *See, e.g.*, Dow Chem. Co. v. United States, 476 U.S. 227, 238–39 (1986).

218. For example, consider the impact of the Internet within the past ten years.

219. The Court itself seemed to anticipate such an eventuality. *See supra* note 86 and accompanying text.

220. Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

221. *See id.*

succeed in suppressing any information gathered from the through-the-wall monitoring devices, the laser microphones, any phone-monitoring devices that record the contents of his telephone calls, and from the millimeter wave technology that scanned him when he left his room. All of these devices are "technologically-advanced," as defined under the Standard, and subject to the Technologically-Advanced Device Standard suggested here. The information gleaned from these instruments would not normally be available to unaided human senses without physically intruding into either Doe's hotel room or onto his person.[222] In contrast, information gained from undercover police units, security videos, closed circuit television, and the "beeper"[223] placed in his car is admissible. These devices do not provide any information that is unavailable to unaided human senses, and no physical intrusion into Doe's car or his person is required for unaided human senses to obtain this information. Gathering this information, under the Standard, does not require a warrant.

As to the contents of Doe's letter, the Technologically-Advanced Device Standard suggested here dictates that any satellite photos taken of the letter's contents be suppressed. Such images are taken from space; an unaided human's sight from that vantage point could not see that much detail. This device is "technologically-advanced" for purposes of the Standard because it provides detail completely unavailable to unaided human senses from the observation point. Further, without physically seizing the letter, the contents would not likely be available to law enforcement.[224] Thus the Standard requires that this information be suppressed.

However, if the letter's contents are caught on hotel lobby security cameras, the result is different. These cameras would most likely only be able to enhance what is already detectable by the human eye; thus, they are not "technologically-advanced" for the purposes of the Standard. Additionally, this information could be gathered from covert police operatives in the hotel lobby looking over Doe's shoulder. Thus, neither provision of the Standard is violated, and the letter's contents, when gathered in this manner, would be admissible without first obtaining a warrant.

Kyllo applied some of the principles that comprise the Technologically-Advanced Device Standard. Unfortunately, the Court appears to have applied these principles in conjunction with elements and considerations contrary to prior Fourth Amendment jurisprudence.[225] The Court should adopt the Standard suggested here

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222. This, of course, assumes that the walls of Doe's hotel room are not thin enough to allow the police to listen to his end of conversations through the wall unaided. If this were the case, then the police could argue that the Standard should not apply to that information, since it was possible to gain it through unaided human senses.

223. For a definition of the term "beeper," see *supra* note 1.

224. This is assuming that Doe does not read the letter within sight of police officers equipped with binoculars; such observation would merely enhance readily viewable detail and not invoke the Standard.

225. For example, compare the Court's treatment of the home in *Kyllo* with its pronouncement that the Fourth Amendment "protects people, not places" in *Katz*. *Compare* Kyllo v. United States, 533 U.S. 27 (2001) *and supra* text accompanying notes 136–95 *with* United States v. Katz, 389 U.S. 347, 351 (1967) *and supra* text accompanying notes 46–66.

and eliminate the need for reliance on elements already rejected. Should the chance present itself, the Court should use the opportunity to clarify Fourth Amendment jurisprudence, thereby helping to guarantee privacy protection for individuals under the Fourth Amendment in the face of rapidly advancing surveillance technology.

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